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Andrew Rodney Ferlitsch

SLA1350

4524

7590  
Gerald W. Mallszewski  
P.O. Box 270829  
San Diego, CA 92198-2829

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MCLEAN, NEIL R

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,400	<b>Applicant(s)</b> FERLITSCH, ANDREW RODNEY	
	<b>Examiner</b> Neil R. McLean	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-9,11-17,19,21-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6-9, 11-17, 19, 21-24 and 26-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1-2, 4, 6-9, 11-17, 19, 21-24, and 26-30 are now pending in this application.

Claims 1, 7, 16 and 22 have been amended.

Claims 3, 5, 10, 18, 20, and 25 have been canceled.

### ***Response to Arguments***

2. Regarding Applicant's Argument:

"Kuo does not accept a print job in a printer language format associated with a first printer device as recited in claims 1 and 16."

Examiner's Response:

The Examiner respectfully submits that the main reference used in this action, Kawamoto discloses a print job in a printer language format associated with a first printer device as recited in claims 1 and 16 (accepting a print job in a first printer language format associated with a first printer device type (e.g., The graphic engine 202 similarly loads the printer driver 203 prepared every printing apparatus from the external memory 11 into the RAM 2 and converts the output of the application 201 into a control command of the printer 1500 by using the printer driver 203 as described in Column 7, lines 58-62).

3. Regarding Applicant's Argument:

"Kuo does not describe an IR document that can be parallel processed by plugins accessing an IR document stored in a shared memory. As noted above, Kuo's backplane serially processes CCD data through the plugins."

Examiner's Response:

Kuo et al. and Kawamoto et al. do not disclose expressly parallel processing the IR document, and processing the IR document using a combination of parallel and serial processes.

Kawamoto discloses converting the print job into an internal representation (IR) document (Column 19, lines 15-22) that is independent of a printer device target and the language format associated with a printer device target (Referring to Figure 5, the common printer driver 301 forms print data which does not depend on each printing apparatus on the network as described in Column 9, lines 11-13);

Yamamoto et al. discloses using both parallel and serial interfaces (FIG. 3 shows an example of a memory map in the RAM 2 upon printing in the host computer 1500 or upon setting of the printer. An application 32 executes the print by using an OS 36 and a print program (printer driver) 35. A BIOS 37 is called a basic input/output system and includes therein a program for driving a parallel interface, a serial interface, or the like which is connected to the printer 1500.)

Yamamoto et al., Kuo et al. & Kawamoto are combinable because they are from the same field of endeavor of image processing; e.g., all references use despooling modules. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use parallel and serial processing of a document in a despooling system. The suggestion/motivation for doing so would have been to have

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more than one method of processing data. Depending on the systems involved one method may be more suited than the other in terms of speed and economy. Therefore, it would have been obvious to combine the parallel and serial processing method of Yamamoto et al. with Yamamoto and Kuo to obtain the invention as specified.

4. Regarding Applicant's Argument:

“Kuo's backplane does not convert raw image CCD data into an internal representation (IR) document. In fact, the image data is not a document. More explicitly, Kuo's plug-ins do not process a print job that has been converted into an IR document, as recited in Applicant's claims 1 and 16.”

Examiner's Response:

The image data of Kuo's that is stored in memory is retrieved by going to the exact address where the data is stored. A routine can be called to retrieve a pointer to a buffer that contains the data. This routine would simply return the address of the data stored in memory. In the case of when the data is stored on disk, this routine would allocate a buffer, and read the data from disk into the newly allocated buffer, then return the address of the newly allocated buffer. This process is indiscriminate of the type of data that is retrieved because it is digitized and therefore it would not matter if the data is image data or document data.

The Examiner would point to the Applicants Specification, Page 10, lines 15-22, in particular:

“In other aspects, the print data may be **raster data or representations** other than a PDL, **such as images**.” The Kuo reference which was noted also incorporated watermarks(980 in Figure 6) which the applicant cited as one of the ‘jobs’ that may be performed in Applicant’s Specification, Page 11, lines10-12.

5. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, although the Examiner searched several classes, the art that the Examiner cited and used in the Office Action including the prior art made of record and not relied upon was all from Class 358, which deals with the communication or reproduction of a static image or sequence of static images.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4, 6-9, 11-17, 19, 21-24, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto (US 7,199,890) in view of Kuo et al. (US 6,400,471) and further in view of Yamamoto et al. (US 7,161,696).

Regarding Claim 1: (currently amended)

A method for managing print jobs using a print subsystem despooling backplane, the method comprising:

accepting a print job in a first printer language format associated with a first printer device type (e.g., The graphic engine 202 similarly loads the printer driver 203 prepared every printing apparatus from the external memory 11 into the RAM 2 and converts the output of the application 201 into a control command of the printer 1500 by using the printer driver 203 as described in Column 7, lines 58-62), at a print subsystem despooling backplane input interface (Column 18, lines 61-67);

calling a plurality of despooling backplane plugins (The device which converts the print command into intermediate code; Column 19, lines 11-13);

converting the print job into an internal representation (IR) document (Column 19, lines 15-22) that is independent of a printer device target and the language format associated with a printer device target (Referring to Figure 5, the common printer driver 301 forms print data which does not depend on each printing apparatus on the network as described in Column 9, lines 11-13);

processing the IR document using parallel processing (Column 8, lines 52-54);

converting the processed IR document into a processed print job in a second printer language format associated with a second printer device type (a plurality of **second converting means** (printer drivers 203, 601, 602) for converting the drawing object stored in the storing means into print control information that **is peculiar to the printing apparatus that is selected** and for transferring the print

control information to each corresponding printing apparatus as described in Column 9, lines 45-50);(The process which allows the despooler 305 to again output the intermediate code into a print command for the printer; Column 19, line 27); and  
supplying the processed print job at a despooling backplane output interface  
(See 204 in Figure 3 supplying data to printer 1500).

Kawamoto does not disclose expressly:  
a plurality of backplane plugins;  
storing the IR document in a shared data memory ;  
each plugin accessing the IR document in shared data memory;  
generating a multiple processed IR document by using the plurality of plugins to perform an action selected from a group consisting of parallel processing the IR document, serially processing the IR document, and processing the IR document using a combination of parallel and serial processes

Kuo et al. discloses:  
a plurality of backplane plugins (Image Processing Backplane 630 includes three plug-in image processing software modules IPM(1) 622, IPM(2) 624 and IPM(3) 626 as shown in Figure 6, and described in Column 9, lines 9-11);

storing the IR document in a shared data memory (FIG. 5 is a diagram of the non-volatile memory of FIG. 4 showing the image processing backplane and image processing modules stored within.);

each plugin accessing the IR document in shared data memory (Image processing backplane 630 retrieve lines of data that are fed into IPM(1) 622, which in turn feeds into IPM(2) 624, which in turn feeds into IPM(3) 626) as shown in Figure 6 and described in Column 9, lines 29-32);



generating a multiple processed IR document by using the plurality of plugins to perform an action (e.g., In the present embodiment, three image processing modules are utilized. The first image processing module performs linearization, defect correction, and white balance. The second image processing module performs interpolation and color correction. The third image processing module performs sharpening and color space conversion as described in Column 8, lines 60-66.)

Kuo et al. & Kawamoto are combinable because they are from the same field of endeavor of image processing, e.g., both coordinate the functioning and communication of the various image processing stages and handles the data flow between the various stages.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a plurality of plug-in modules to process data.

The suggestion/motivation for doing so would have been to integrate the different platforms. Different versions of operating systems increase development and manufacturing costs, and are expensive to support. Upgrades must be prepared for each version, and separate users manuals must also be written and published as disclosed by Kuo in Column 2, lines 10-17.

Therefore, it would have been obvious to combine the plug in modules of Kuo et al. with the image processing system of Kawamoto to obtain the invention as specified in claim 1.

Kuo et al. and Kawamoto et al. disclose all of the limitations disclosed above.

Kuo et al. and Kawamoto et al. do not disclose expressly parallel processing the IR document, and processing the IR document using a combination of parallel and serial processes.

Yamamoto et al. discloses using both parallel and serial interfaces (FIG. 3 shows an example of a memory map in the RAM 2 upon printing in the host computer 1500 or upon setting of the printer. An application 32 executes the print by using an OS 36 and a print program (printer driver) 35. A BIOS 37 is called a basic input/output system and includes therein a program for driving a parallel interface, a serial interface, or the like which is connected to the printer 1500.)

Yamamoto et al., Kuo et al. & Kawamoto are combinable because they are from the same field of endeavor of image processing; e.g., all references use despooling modules.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use parallel and serial processing of a document in a despooling system.

The suggestion/motivation for doing so would have been to have more than one method of processing data. Depending on the systems involved one method may be more suited than the other in terms of speed and economy.

Therefore, it would have been obvious to combine the parallel and serial processing method of Yamamoto et al. with Yamamoto and Kuo to obtain the invention as specified in claim 1.

Regarding Claim 2: (previously presented)

Kawamoto further discloses the method of claim 1 wherein calling the plurality of despooling backplane plugin includes calling plugins chosen from the group including:

user-selected plugins;

predetermined plugins responsive to criterion such as printer driver, printer model, printer configuration, printer condition, user, administrative grouping, document content, and document type (Column 9, lines 45-50); and

plugins called from other plugins (Column 9, lines 45-50).

Regarding Claim 3: Cancelled

The method of claim 1 wherein converting the print job into an IR document includes converting the print job into an IR document that is independent of a printer device target and the language format associated with a printer device target (Column 9, lines 11-13).

Regarding Claim 4: (currently amended)

Kawamoto further discloses the method of claim ~~[[3]]~~ 1 wherein processing the IR document in response to the plurality of plugin includes performing a process selected from the group including translating the print job into an IR document (Column 9, lines 39-43), analyzing, modifying the print job data, modifying control of the print job, gathering print subsystem-external information related to the print job, producing print subsystem-external information related to the print job, setting print subsystem-external information related to the print job, and reassembling IR documents.

Regarding Claim 5:

Canceled

Regarding Claim 6: (previously presented)

Kawamoto further discloses the method of claim 4 wherein reassembling IR documents includes removing conflicts between a plurality of processed IR documents (Column 18, lines 50-55); and

wherein converting the processed IR document into a processed print job includes converting the plurality of IR documents into the processed print job.

Note: It is clear that Kawamoto's print control method is designed to repeat itself.

Regarding Claim 7: (original)

Kawamoto further discloses the method of claim 4 wherein setting print subsystem-external information related to the print job includes selecting the second printer language format associated with the second printer device type (a plurality of **second converting means** (printer drivers 203, 601, 602) for converting the drawing object stored in the storing means into print control information that **is peculiar to the printing apparatus that is selected** and for transferring the print control information to each corresponding printing apparatus as described in Column 9, lines 45-50).

Regarding Claim 8: (original)

Kawamoto further discloses the method of claim 4 wherein gathering print subsystem-external information related to the print job includes monitoring a printer

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condition (Column 11, lines 55-67) selected from the group including the availability of connected printing devices, currently printing print jobs, pending print jobs, completed print jobs, print job failures, printer performance, printer locality, and printer capabilities.

Regarding Claim 9: (original)

Kawamoto further discloses the method of claim 8 wherein monitoring a printer condition includes:

querying a node selected from the group including a print subsystem spooler (Column 7, line 45; System Spooler in Figure 2), a print subsystem port manager, a printer manager, a print service, and a printer (1500 in Figure 2); and

maintaining a cache of printer condition information (Column 7, lines 19-21).

Regarding Claim 10: (Canceled)

Kawamoto further discloses the method of claim 1 wherein converting the print job into an IR document includes storing the IR document as shared data (Column 8, lines 15-18); and

wherein processing the IR document in response to the plugin includes processing the IR document accessed from shared data (Column 8, lines 40-45).

Regarding Claim 11: (original)

Kawamoto further discloses the method of claim 4 wherein translating the IR document includes parsing spool/raster image processor (RIP) footers and headers,

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parsing a print job control header, and parsing language data selected from the group including raster (Column 6, lines 56-59), image, and page description language (PDL) data.

Regarding Claim 12: (original)

Kawamoto further discloses the method of claim 11 wherein parsing a print job control header includes:

calling a plurality of printer job control header plugins selected from the group including printer job language (PJL) and job definition format (JDF) plugins (Column 7, lines 30-34); and

using the print job control header plugin that recognizes the print job control header data (Column 7, lines 58-62).

Regarding Claim 13: (original)

Kawamoto further discloses the method of claim 11 wherein parsing language data includes:

calling a plurality of language plugins selected from the group including raster (Column 6, lines 56-59), image, printer control language (PCL), portable document format (PDF), PostScript (PS), PCL XL, HP GL/2, IPDS, Escape P, SCS, and TIFF plugins; and

using the language plugin that recognizes the language data (Column 7, lines 58-62).

Regarding Claim 14: (original)

Kawamoto further discloses the method of claim 4 wherein analyzing the IR document includes performing an action selected from the group including job accounting, printer pooling, job splitting, access control, security, content filtering, resource downloading, compression, reformatting (Column 9, lines 45-50), and language translation.

Regarding Claim 15: (original)

Kawamoto further discloses the method of claim 4 wherein gathering print subsystem-external information related to the print job includes gathering information selected from the group including a print subsystem host (3000 in Figure 3), a printer (1500 in Figure 3), a printer device manager, and a print service.

Regarding Claim 16: (currently amended)

A print subsystem despooling backplane, the backplane comprising:  
a library of despooling backplane plugins (203, 601 and 602 in Figure 5);  
a controller having an interface to accept a print job in a first printer language format associated with a first printer device type (e.g., The graphic engine 202 similarly loads the printer driver 203 prepared every printing apparatus from the external memory 11 into the RAM 2 and converts the output of the application 201 into a control command of the printer 1500 by using the printer driver 203 as described in Column 7, lines 58-62);(Column 18, lines 61-67), the controller converting the print job to an internal representation (IR) document (Column 19, lines 15-22) that is independent of a

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printer device target and the language format associated with a printer device target

(Referring to Figure 5, the common printer driver 301 forms print data which does not depend on each printing apparatus on the network as described in Column 9, lines 11-13), and supplying the IR document at an interface (Column 8, lines 15-18);

a shared data memory having an interface to accept the IR document;

a component processor having an interface to call a plurality of plugins from the library (Spool File Manager 304 in Figure 3) and an interface to accept the IR document accessed from the shared data memory (Spool File 303 in Figure 3), the component processor generating a multiple processed IR document by using the plugins to perform an action selected from a group consisting of parallel processing the IR document, serially processing the IR document, and processing the IR document using a combination of parallel and serial processes, (Column 8, lines 52-54) converting the processed IR document into a processed print job in a second printer language format associated with a second printer device type (a plurality of second converting means (printer drivers 203, 601, 602) for converting the drawing object stored in the storing means into print control information that is peculiar to the printing apparatus that is selected and for transferring the print control information to each corresponding printing apparatus as described in Column 9, lines 45-50) (Column 8, lines 54-55), and supplying the processed print job at an interface (See 204 in Figure 3 supplying data to printer 1500).

Kawamoto does not disclose expressly:

a plurality of backplane plugins;

storing the IR document in a shared data memory ;



each plugin accessing the IR document in shared data memory;  
generating a multiple processed IR document by using the plurality of plugins to perform an action selected from a group consisting of parallel processing the IR document, serially processing the IR document, and processing the IR document using a combination of parallel and serial processes

Kuo et al. discloses:

a plurality of backplane plugins (Image Processing Backplane 630 includes three plug-in image processing software modules IPM(1) 622, IPM(2) 624 and IPM(3) 626 as shown in Figure 6, and described in Column 9, lines 9-11);

storing the IR document in a shared data memory (FIG. 5 is a diagram of the non-volatile memory of FIG. 4 showing the image processing backplane and image processing modules stored within.);

each plugin accessing the IR document in shared data memory (Image processing backplane 630 retrieve lines of data that are fed into IPM(1) 622, which in turn feeds into IPM(2) 624, which in turn feeds into IPM(3) 626) as shown in Figure 6 and described in Column 9, lines 29-32);

generating a multiple processed IR document by using the plurality of plugins to perform an action (e.g., In the present embodiment, three image processing modules are utilized. The first image processing module performs linearization, defect correction, and white balance. The second image processing module performs interpolation and color correction. The third image processing module performs sharpening and color space conversion as described in Column 8, lines 60-66.)

Kuo et al. & Kawamoto are combinable because they are from the same field of endeavor of image processing, e.g., both coordinate the functioning and communication of the various image processing stages and handles the data flow between the various stages.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a plurality of plug-in modules to process data.

The suggestion/motivation for doing so would have been to integrate the different platforms. Different versions of operating systems increase development and manufacturing costs, and are expensive to support. Upgrades must be prepared for each version, and separate users manuals must also be written and published as disclosed by Kuo in Column 2, lines 10-17.

Therefore, it would have been obvious to combine the plug in modules of Kuo et al. with the image processing system of Kawamoto to obtain the invention as specified in claim 1.

Kuo et al. and Kawamoto et al. disclose all of the limitations disclosed above.

Kuo et al. and Kawamoto et al. do not disclose expressly parallel processing the IR document, and processing the IR document using a combination of parallel and serial processes.

Yamamoto et al. discloses using both parallel and serial interfaces (FIG. 3 shows an example of a memory map in the RAM 2 upon printing in the host computer 1500 or upon setting of the printer. An application 32 executes the print by using an OS 36 and a print program (printer driver) 35. A BIOS 37 is called a basic input/output system and includes therein a program for driving a parallel interface, a serial interface, or the like which is connected to the printer 1500.)

Yamamoto et al., Kuo et al. & Kawamoto are combinable because they are from the same field of endeavor of image processing; e.g., all references use despooling modules.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use parallel and serial processing of a document in a despooling system.

The suggestion/motivation for doing so would have been to have more than one method of processing data. Depending on the systems involved one method may be more suited than the other in terms of speed and economy.

Therefore, it would have been obvious to combine the parallel and serial processing method of Yamamoto et al. with Yamamoto and Kuo to obtain the invention as specified in claim 16.

Regarding Claim 17: (original)

Kawamoto further discloses the backplane of claim 16 wherein the component processor calls plugins chosen from the group including:

user-selected plugins; predetermined plugins responsive to criterion such as printer driver, printer model, printer configuration, printer condition, user, administrative grouping, document content, and document type (Column 9, lines 45-50); and plugins that are called from other plugins (Column 9, lines 45-50).

Regarding Claim 18: (cancelled)

Kawamoto further discloses the backplane of claim 16 wherein controller converts the print job into an IR document that is independent of a printer device target and the language format associated with a printer device target (Column 9, lines 11-13).

Regarding Claim 19: (currently amended)

Kawamoto further discloses the backplane of claim ~~[[18]]~~ 16 wherein the component processor performs a process selected from the group including translating the print job into an IR document (Column 9, lines 39-43), analyzing, modifying the print job data, modifying control of the print job, gathering print subsystem-external information related to the print job, producing print subsystem-external information related to the print job, setting print subsystem-external information related to the print job, and reassembling IR documents.

Regarding Claim 20: (Canceled)

The backplane of claim 19 wherein the component processor calls (Column 9, lines 20-23) a plurality of plugins (Column 9, lines 5-10) and uses the plurality of plugins to perform an action selected from the group including parallel processing the IR document (Column 9, line 18), serially processing the IR document, and processing the IR document using a combination of parallel and serial processes.

Regarding Claim 21: (previously presented)

Kawamoto further discloses the backplane of claim 19 wherein the component processor reassembles IR documents to remove conflicts between a plurality of processed IR documents and converts the plurality of IR documents into the processed print job (Column 18, lines 50-55).

Note: It is clear that Kawamoto's print control method is designed to repeat itself.

Regarding Claim 22: (original)

Kawamoto further discloses the backplane of claim 19 wherein component processor uses print subsystem-external information related to the print job includes selecting the second printer language format associated with the second printer device type (a plurality of second converting means (printer drivers 203, 601, 602) for converting the drawing object stored in the storing means into print control information that is peculiar to the printing apparatus that is selected and for transferring the print control information to each corresponding printing apparatus as described in Column 9, lines 45-50).

Regarding Claim 23: (original)

Kawamoto further discloses the backplane of claim 19 wherein the component processor gathers print subsystem-external information related to the print job by monitoring a printer condition selected from the group including the availability of connected printing devices, currently printing print jobs, pending print jobs, completed print jobs, print job failures, printer performance, consumables, printer locality, and printer capabilities (Column 11, lines 55-67).

Regarding Claim 24: (original)

Kawamoto further discloses the backplane of claim 23 wherein the component processor monitors a printer condition includes by:

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querying a node selected from the group including a print subsystem spooler (Column 7, line 45; System Spooler in Figure 2) , a print subsystem port manager, a printer manager, a print service, and a printer(1500 in Figure 2); and  
storing the printer condition information in cache (Column 7, lines 19-21).

Regarding Claim 25: (Canceled)

The backplane of claim 16 further comprising:  
a shared data memory (Spool File 303 in Figure 3); and  
wherein the component processor accepts the IR document, stores the IR document in the shared data memory, and accesses the IR document from shared data memory for processing (Column 8, lines 40-45).

Regarding Claim 26: (original)

Kawamoto further discloses the backplane of claim 19 wherein the component processor translates the print job into an IR document by parsing spool/raster image processor (RIP) footers and headers, parsing a print job control header, and parsing language data selected from the group including raster (Column 6, lines 56-59), image, and page description language (PDL) data.

Regarding Claim 27: (original)

Kawamoto further discloses the backplane of claim 26 wherein the component processor parses a print job control header by:

calling a plurality of printer job control header plugins selected from the group including printer job language (PJL), and job definition format (JDF) (Column 7, lines 30-34); and

using the print job control header plugin that recognizes the print job control header data (Column 7, lines 58-62).

Regarding Claim 28: (original)

Kawamoto further discloses the backplane of claim 26 wherein the component processor parses the language data by:

calling a plurality of language plugins selected from the group including raster (Column 6, lines 56-59), image, printer control language (PCL), portable document format (PDF), PostScript (PS), and PCL XL, HP GL/2, IPDS, Escape P, SCS, and TIFF plugins; and

using the language plugin that recognizes the language data (Column 7, lines 58-62).

Regarding Claim 29: (original)

Kawamoto further discloses the backplane of claim 19 wherein component processor analyzes the IR document by performing an action selected from the group including job accounting, job control, printer pooling, job splitting, access control, security, content filtering, resource downloading, compression, reformatting (Column 9, lines 45-50), and language translation.

Regarding Claim 30: (original)

Kawamoto further discloses the backplane of claim 19 wherein the component processor gathers print subsystem-external information related to the print job by gathering information selected from the group including a print subsystem host (3000 in Figure 3), a printer (1500 in Figure 3), print service, and a printer device manager.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haltmeyer et al. (US 20030210417) discloses a method for printing to any client printer in a network environment with only a printer server application (a self-configuring driver) installed on the server and the individual printer drivers installed only on the clients to which they are connected, the printer server application dynamically detecting and adapting to any client printer drivers.

### ***Examiner Notes***

9. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the



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references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. McLean whose telephone number is (571)270-1679. The examiner can normally be reached on Monday through Friday 7:30AM-4:00PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571.272.7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Neil R. McLean/  
Examiner, Art Unit 2625

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625